

# **Creative Solutions, Inc.**

## **NuBus™ & SE/30 Hardware Product Summaries**

### **SuperSCSI NuBus Card**

(Available April 1989. List \$989)

The SuperSCSI card provides a high speed link between the Macintosh II™ and SCSI devices. The existing Macintosh II™ SCSI port throughput is limited to about 1 MB/second, and requires the full attention of the motherboard CPU to transfer each byte of data. SuperSCSI operates as an independent bus master, using DMA transfers over the NuBus to and from motherboard memory at rates up to 5 MB/second. The host CPU is relieved from the burden of actual data transfer. Because SuperSCSI transparently intercepts all SCSI Manager calls, the only effect upon your application is that it will now run faster.

SuperSCSI is plug compatible with existing devices and does not require special software or drivers. Existing internal drives may be accessed at higher speeds by simply disconnecting the 50 pin ribbon cable from the motherboard and moving it to the 50 pin ribbon cable header on the SuperSCSI card.

### **Mac II "Greensheets" Interfaces**

The Versatec "Greensheets" printer/plotter/scanner interface is an emerging popular printer/scanner interface for high speed transfer of digital images. Specifying both differential (up to over 1000 feet) and short cable (under 25 feet) options, it is well suited for reliable digital data transmission of image data. Creative Solutions produces both Input and Output "GreenSheets" NuBus Cards.

### **"GreenSheets Parallel Input" Interface (GSPI)**

(Available May 1989. List \$995)

Presents 37P connector, and includes driver in ROM suitable for direct input from VIDAR, Wicks and Wilson, and Versatec scanners. The card may be configured for either differential or short cable Greensheets specifications.

### **"GreenSheets Parallel Output" Interface (GSPO)**

(Available May 1989. List \$950)

Presents a 37S connector, and includes a driver in ROM suitable for direct output to Versatec compatible printer/plotters. A "chooser" compatible driver is in process, and will be announced at a later date.

## **New Products:**

### **Hurdler™ Compression/Expansion/Rotation (CER) Board**

(Available March 1990 - List \$1495)

The Hurdler Compression/Expansion/Rotation accelerator board features:

- CCITT Group IV Compression or Expansion throughput in excess of 16 million pixel elements/second.
- ROM with standard Macintosh device drivers that are installed automatically at startup.
- Driver that is compatible with NIT (New Image Technology) driver.
- Accelerated hardware rotation of 32 x 32 pixel tiles.

### **Mac IIx Prototyping Board (FXPROTO)**

### **Mac IIx Extender Board (FXEXT)**

(Available April 1990. List \$99 each)

This blank breadboard provides the developer a large (12" x 4") wirewrapping area with both NuBus and PDS connectors. The extender board also has both NuBus and PDS connectors and extends the proto board up and out of the chassis by 4" to aid in development.

**Turn page over to see other NuBus™ products and ordering information**



## **Other CSI NuBus™ products:**

### **Hurdler Dual Serial (HDS)**

(Available Now. List \$299.)

A cost effective method to add 2 serial ports to the Macintosh II. RS-232 and 422 compatible, the on-board dedicated 68008 microprocessor ensures sustained data rates up to 38400 baud per channel.

These ports are automatically installed and easily accessed. The ports are mechanically and electronically similar to the Apple serial ports. The drivers for the CSI ports (starting at ".CIn/.COut ") are logically equivalent to the default ".AIn/.AOut and .BIn/

.BOut" drivers. *A new interface to the Comm Toolbox is provided to give end users easy access to the ports from the Control Panel.*

### **Hurdler Quad Serial (HQS)**

(Available Now. List \$379)

Adds four serial ports to the Macintosh II. Same features as HDS above.

### **Hurdler™ II Centronics Parallel Interface (HCPI)**

(Available Now. List \$199)

The Hurdler II CPI board is used to connect a Macintosh II to devices that use the very popular Centronics style interface. The board has a DB25S connector presenting signals compatible with IBM PC compatible printer interfaces. It has been used to interface to laser printers, color printers, plotters and many other Centronics devices. The ROM on the Hurdler CPI may be customized for OEMs requiring a custom driver.

### **Hurdler™ Prototyping Board (HPRO)**

(Available Now. List \$199) Features include: 3800 pin wire-wrap area, NuBus schematics, timing diagrams and application notes, software driver in ROM, and optional ROM Development Tools. The card synthesizes popular Intel, Zilog and Motorola control signals, allowing most LSI peripheral parts to be attached with less than 20 wire-wrap connections. Many customers have reported that they were able to plug this card into their Mac II and "talk" to their custom external device in under an hour.

### **Hurdler™ SE/30 Prototyping Board (30PRO)**

(Available Now. List \$59.95.)

This card provides approximately 30 square inches of wire-wrap prototyping space for the new Macintosh SE/30. It includes the 120 pin connector soldered on. All signals are brought out to pads suitable for installation of .1" wire-wrap or mass termination posts.

### **Hurdler™ SE/30 Extender (30EXT)**

(Available Now. List \$49.95)

Extends the 120 pin connector signals up 2" and provides a right angle connector so that during development or testing, cards may be installed horizontally (component side facing up), extending out the right hand side of the open chassis. This allows much easier access to the signals while debugging, testing or repairing SE/30 expansion cards, and helps avoid some high voltage safety hazards present when working close to the exposed CRT.

### **Engineering services available from CSI:**

In addition to the above cards, Creative Solutions has also designed and built NuBus™ and Apple PDS™ cards to meet unique customer specifications. Some customers of these services include Apple Computer, KODAK, AGFA Matrix instruments division, and Integrated Device Technology. As a result, we have developed a CAD library of functional NuBus™ and PDS logic modules that implement:

- Inexpensive 8-bit NuBus™ Slave devices,
- High Speed 32-Bit NuBus™ Slave devices,
- Intelligent serial and parallel interfaces utilizing a local dedicated 68008,
- Interfaces to other buses
- Dual ported RAM interfaces,
- NuBus™ Bus Master device controllers,
- High performance RISC based Bus Master CPUs (IDT R3000 with 16k instruction and data caches and FPU).

If you have an application which requires development of a custom NuBus™ or Apple PDS™ card, we may be able to get you to market faster with a lower cost design based upon one of our "off the shelf" solutions.

**For more information contact:**

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